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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,846	03/11/2002	William George Carson Irwin	IRI05294	2792

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MOTOROLA, INC.  
CORPORATE LAW DEPARTMENT - #56-238  
3102 NORTH 56TH STREET  
PHOENIX, AZ 85018

EXAMINER

AFSHAR, KAMRAN

ART UNIT	PAPER NUMBER
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2681

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DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/070,846

Applicant(s)

IRWIN ET AL

Examiner

Kamran Afshar, 703-305-7373

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-25 is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-14,16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (WO 99/23769) in view of Hansell (2,627,021).

With respect to claims 1, 12, 17, Martin discloses three aircrafts flying eight hour missions each can provide continuous communication capabilities to service region 16 (Fig. 1, Pages 7 lines 1-4), each aircraft transmits beams to cover a service area (Fig. 1). In an analogous, the examiner takes that, the aircraft in the Martin reference can fly at an altitude of approximately between 52,000 and 60,000 feet. So, it can fly at below a high altitude level and can be used in different weather, which is known in the art of using the aircraft-based communication service (Page 8 lines 20-33). However, Martin does not disclose the flight patterns of aircraft at less than 50,000 feet. Hansell discloses a communication aircraft having a plurality of aircraft flying patterns of 250 miles apart, each flies at 10, 000 to 15,000 feet or higher. It would have been obvious to one skilled in the art at the time the invention was made to have Martin, modified by Hansell in order to prevent interruption of the communication service.

Regarding claims 2-4, it is noted that it is inherent to have aircrafts to support the aircraft-based communication system as well as to have a reserved aircraft to substitute a servicing aircraft in case of malfunctioning of the servicing aircraft. The motivation being that it provides communication service in the coverage area without interrupted.

Regarding claim 14, Martin discloses a ground control station (Fig.2) for switching over service.

Regarding claims 11, 18, Martin discloses the aircrafts adjust the flight patterns to circumvent a storm (Page 8 lines 2032).

Regarding claim 13, Martin discloses a ground control station (Fig.2) for switching over service.

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Regarding claim 16, Martin discloses three-aircraft-based communication system in which each aircraft flies at parallel flight patterns and 180 degrees out-of-phase flight patterns (Fig. 1).

3. Claims 15, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Hansell (2,627,021) and further in view of Rouffer (U.S. Patent 5,625,867).

With respect to claims 15, 19-20, Martin and Hansell do not teach the step of adjusting power levels of the aircrafts in case of a switch over. Rouffer discloses a handoff in a satellite 28 based system in which as the quality of service provided satellites are deteriorating, terminals 25, 26 are handed off from a first satellite to a second satellite (column 5 lines 33-55, figs. 4-5). The motivation being that it prevents dropped calls.

#### ***Allowable Subject Matter***

4. Claims 21-25 are allowed.

The following is an examiner's statement of reasons for allowance: 21-25.

With respect to claim 21, the prior art of record fails to disclose or render obvious that

If a weather pattern affect the communications coverage, moving from the first flight pattern along the circumscribing flight pattern circle until a new operating point corresponding to a point of an alternate flight pattern is reached; and executing the alternate flight pattern having a radius similar to the first flight pattern to maintain the cellular communications coverage over the predetermined geographic area.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Conclusion***

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (703) 305-7373. The examiner can be reached on Monday-Friday.

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If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached @ (703) 308-4825. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306 for all communications.



**Kamran Afshar**



**DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600**